AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior listings of claims in the present application.

What Is Claimed Is:

1. (currently amended) A node in a ring network system in which a plurality of insertion nodes are connected in a loop through a ring transmission path, comprising:

an every-insertion-node oriented buffer unit having individual buffer memories at which arrived packets are inserted into said ring transmission path, and accumulating the packets in said individual buffer memories;

a read control unit reading the packets in a fair way on the basis of predetermined weights respectively from said individual buffer memories; and

a storage module stored with mappings between said insertion nodes and weight values different from each other as the predetermined weights that are proportional to the number of connections connected to said ring transmission path for inserting the packets;

wherein said read control unit implements a weighted read control of the packets stored in the every-insertion-node oriented buffer unit, based on the weight values stored in said storage module according to said insertion nodes and proportional to the number of connections connected to said ring transmission path.

2. (previously presented) A node according to claim 1, further comprising:

an identifying unit identifying said insertion node at which the packets are inserted into said ring transmission path on the basis of specifying information contained in the packet; and

an accumulation control unit accumulating the packets in the corresponding buffer memory on the basis of a result of identifying said insertion node.

Claims 3-6. (canceled)

7. (previously presented) A node according to claim 2, wherein the buffer memory of said every-insertion-node oriented buffer unit is physically segmented into a plurality of areas, and

said accumulation control unit permits only the packet from said corresponding insertion node to be written to each of the segmented areas of the buffer memory.

8. (previously presented) A node according to claim 2, wherein the individual buffer memories of said every-insertion-node oriented buffer unit are provided by dynamically logically segmenting a shared storage area, and

said accumulation control unit writes the packet from said corresponding insertion node to each of the individual buffer memories into which the shared storage area is dynamically logically segmented.

9. (previously presented) A node according to claim 2, wherein said identifying unit identifies said insertion node at which the packet is inserted into said ring transmission path on the basis of an insertion node number as the specifying information contained in the packet.

10. (previously presented) A node according to claim 2, further comprising a storage module stored with mappings between traffic identifiers of the packets and the insertion node numbers, and

wherein said identifying unit identifying said insertion node at which the packet is inserted into said ring transmission path on the basis of an ~~the~~ insertion node number corresponding to the traffic identifier, as the specifying information contained in the packet, which is obtained by referring to said storage module.

11. (currently amended) A packet control method in a ring network system in which a plurality of insertion nodes are connected in a loop through a ring transmission path, comprising:

providing individual buffer memories at which arrived packets are inserted into said ring transmission path, and accumulating the packets in said individual buffer memories;

reading the packets in a fair way on the basis of predetermined weights respectively from said individual buffer memories;

storing mappings between said insertion nodes and weight values different from each other as the predetermined weights that are proportional to the number of connections connected to said ring transmission path for inserting the packets; and

implementing a weighted read control of the packets stored in said individual buffer memories, based on the weight values stored according to said insertion nodes and proportional to the number of connections connected to said ring transmission path.

12. (previously presented) A packet control method according to claim 11, further comprising:

identifying said insertion node at which the packets are inserted into said ring transmission path on the basis of specifying information contained in the packet; and

accumulating the packets in the corresponding buffer memory on the basis of a result of identifying said insertion node.

Claims 13-16. (canceled)

17. (previously presented) A packet control method according to claim 12, further comprising permitting only the packet from said corresponding insertion node to be written to each of a plurality of physically segmented areas of the buffer memory.

18. (previously presented) A packet control method according to claim 12, further comprising writing the packet from said corresponding insertion node to each of the buffer memories into which a shared storage area is dynamically logically segmented.

19. (previously presented) A packet control method according to claim 12, further comprising identifying said insertion node at which the packet is inserted into said ring transmission path on the basis of an insertion node number as the specifying information contained in the packet.

20. (previously presented) A packet control method according to claim 12, further comprising:

storing mappings between traffic identifiers of the packets and the insertion node numbers; and

identifying said insertion node at which the packet is inserted into said ring transmission path on the basis of an insertion node number corresponding to the traffic identifier, as the specifying information contained in the packet, which is obtained by referring to a content of the storage.